

Ecological site DX035X03G001

Twoneedle Pinyon/Oneseed Juniper Woodland - Zuni

13 to 17 inches

Last updated: 5/20/2025
 Accessed: 05/22/2026

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Ecological site concept

This site occurs on moderately deep to very deep soils with fine loamy textures. Slopes range from 1 to 10 percent.

Table 1. Dominant plant species

Tree	(1) <i>Pinus edulis</i> (2) <i>Juniperus monosperma</i>
Shrub	(1) <i>Artemisia nova</i> (2) <i>Atriplex canescens</i>
Herbaceous	(1) <i>Pascopyrum smithii</i>

Legacy ID

F035XG001NM

Physiographic features

The western plateau ranges from 6,600-8,000 feet. It consists of an area of broad mesas and plateaus interspersed with numerous deep canyons and dry washes.

Table 2. Representative physiographic features

Landforms	(1) Plateau (2) Hill (3) Fan remnant
Elevation	2,010 – 2,440 m
Slope	0 – 10 %
Aspect	Aspect is not a significant factor

Climatic features

The western plateau area experiences cool, wet winters and warm summers with monsoon moisture from July to September.

Table 3 Representative climatic features

Frost-free period (average)	140 days
Freeze-free period (average)	
Precipitation total (average)	410 mm

Influencing water features

This is an upland site, and is not associated with water features or wetlands. During heavy rain events, this site may receive run-on moisture from landforms above and contribute runoff to landforms below.

Soil features

These soils are deep to very deep, well-drained, moderate to moderately slow permeability formed in medium to moderately fine textured material. These soils are on mesas, cuestras, fan remnants, and alluvium fans. Slopes range from 1 to 10 percent.

Soil survey associations:

This ecological site is associated with the map units and soil components in the following soil surveys. Future updates to this soil survey may affect these associations. For up-to-date associations between soil components and this ecological site, refer to NASIS. Associations between ecological sites and soil components are maintained in NASIS via the ecological site ID.

MAP UNIT NAME

Soil survey...Map unit symbol...Soil components

McKinley.....315..... Flugle

McKinley.....305..... Celavar

Table 4. Representative soil features

Surface texture	(1) Loam (2) Sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderate
Soil depth	50 – 200 cm
Surface fragment cover <=3"	0 – 10 %
Surface fragment cover >3"	Not specified

Available water capacity (0-101.6cm)	7.62 – 25.4 cm
Calcium carbonate equivalent (0-101.6cm)	0 – 10 %
Electrical conductivity (0-101.6cm)	Not specified
Soil reaction (1:1 water) (0-101.6cm)	7.2 – 10
Subsurface fragment volume <=3" (Depth not specified)	0 – 10 %
Subsurface fragment volume >3" (Depth not specified)	Not specified

Ecological dynamics

Woodland vegetation is distinguished from forest vegetation by having smaller trees with canopies that do not overlap.

Grasses are more prevalent since the trees are widely spaced.

The terrain is dry and rocky and characterized by limited moisture.

State and transition model

Additional community tables

Type locality

Location 1: Cibola County, NM	
Latitude	35° 6'11"
Longitude	109° 2'40"

Contributors

Steve Lacy

Approval

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	05/22/2026
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. Number and extent of rills:

2. Presence of water flow patterns:

3. Number and height of erosional pedestals or terracettes:

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):

5. Number of gullies and erosion associated with gullies:

6. Extent of wind scoured, blowouts and/or depositional areas:

7. Amount of litter movement (describe size and distance expected to travel):

8. Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):

9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):

10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):

12. Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):

Dominant:

Sub-dominant:

Other:

Additional:

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):

14. Average percent litter cover (%) and depth (in):

15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):

16. Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:

17. Perennial plant reproductive capability:
